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Foreign Documents Branch C I A Periodical Abstracts

14 Jul 1948

SCIENTIFIC

Number 55

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Abstracted in this issue:

<u>Title</u>	<u>Issue</u>	<u>Date</u>
<u>Russian Periodicals</u>		
"Doklady Akademii Nauk SSSR, Novaya Seriya" (Reports of the Academy of Sciences of the USSR, New Series) Cards 4-17, 28, 29, 41-59, 87-99	Vol LVIII No 8	Dec 1947
"Doklady Akademii Nauk SSSR, Novaya Seriya" (Reports of the Academy of Sciences of the USSR, New Series) Cards 1-3, 18-27, 30, 60-86, 100	Vol LVIII No 9	Dec 1947
"Byulleten' Eksperimental'noy Biologii i Meditsiny" (Bulletin of Experimental Biology and Medicine)* Cards 31-40	Vol XXIV No 6 (12)	1947

NOTE

In indexing these abstracts the following guides are used: MEDICINE - "Quarterly Cumulative Index Medicus," American Medical Association, CHEMISTRY - "Chemical Abstracts Subject Index," American Chemical Society; GENERAL - "Subject Headings for Technical Libraries," US Department of Commerce, Office of Technical Services.

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FDB Periodical Abstracts Scientific No 55

USSR/Chemistry - Acetyl Chloride Chemistry - Phosphorus Alloys Dec 1947 <p>"Action of Acetyl Chloride on Diethyl Sodium and Potassium Phosphide," A. E. Arbuzov, Academician; M. M. Azanovskaya, Sci Res Chem Inst, Kazan State U imeni V. I. Lenin, 3 pp.</p> <p>"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9</p> <p>Describes experiments showing that an abnormal product is obtained when acetyl chloride acts on diethyl sodium or potassium phosphide under certain conditions, and that a substance with a high boiling point is obtained when ether is used</p> FDB 55T1	USSR/Chemistry - Analysis Chemistry - Combustibles Dec 1947 <p>"Genetic Classification of Caustic Bioliths," S. M. Grigor'yev, Energetics Inst imeni G. M. Krizhizhanovskiy, 4 pp</p> <p>"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9</p> <p>Describes experiment on classification of combustibles according to their element composition expressed in atomic percentages, instead of analysis expressed in usual gravimetric percentages. Submitted by Academician N. P. Chizhevskiy, 30 Sep 1947.</p> FDB 55T2
USSR/Chemistry - Polarization Chemistry - Electrochemistry Dec 1947 <p>"Multielectrode and Partially Polarized Systems," G. B. Klark, Lab of Corrosion of Alloys, Inst Phys Chem; G. V. Akimov, Corr Mem, Acad Sci USSR, Lab of Corrosion of Alloys, Inst Phys Chem, 4 pp</p> <p>"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9</p> <p>Discusses influence of ohmic resistance on polarization of binary electrochemical systems, and describes experimental apparatus and results.</p> FDB 55T3	USSR/Chemistry - Maltose, Formation of Chemistry - Amylase Dec 1947 <p>"Generation of Maltose by Reactions on Glucose-1-Phosphate Phosphorilase and Amylase," A. I. Oparin, Academician; T. N. Yevreinova, 2 pp</p> <p>"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8</p> <p>Authors report results of experiments they conducted on homogenous solutions having admixtures of β amylase, and phosphorilase. Explain methods by which these substances were derived. Chemical progress of experiment can be represented as follows: Glucose-1-phosphate <u>phosphorilase</u> poly-</p> FDB 55T4
USSR/Chemistry - Iron, Passivity of Chemistry - Solutions Dec 1947 <p>"Solubility and Passivation of Iron in Alkaline Solutions," B. Kabanov, D. Leykis, Inst Phys Chem, Acad Sci USSR, 3 pp</p> <p>"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8</p> <p>Discuss mechanisms of the process $\text{Fe} \rightarrow \text{Fe}(\text{OH})_2$, and passivation of iron necessary to this process. Also explain the relation of overvoltage and results of the process $\text{Fe} \rightarrow \text{Fe}(\text{OH})_2$. Study of mechanisms of solubility and passivation of iron in solutions continues. Submitted by Academician A. N. Frumkin, 25 Jul 1947.</p> FDB 55T5	USSR/Chemistry - Maltose, Formation of (Contd) Dec 1947 <p>saccharide <u>amylase</u> maltose. Reaction of this chain can vary, however, depending on the activity of ferments. Submitted, 26 Oct 1947.</p> FDB 55T4
USSR/Electricity Ceramics, Electro Insulation, Electric Dec 1947 <p>"Thermostable Electric Insulating Ceramic," V. G. Avetikov, 4 pp</p> <p>"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8</p> <p>In recent electric insulation technology much use was made of ceramic material with good resistance to sharp thermal shocks. Records results of experiments conducted to discover ceramic crock, whose linear expansion would not exceed $1.5 \cdot 10^{-6}$. Experiments were successful, and material discovered which had</p> FDB 55T6	USSR/Geology Geological Prospecting Petroleum Dec 1947 <p>"Structure of 'Budiazh' in Granitized Regions," N. G. Sudovikov, 3 1/4 pp</p> <p>"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8</p> <p>Summarizes monograph describing petrography of western areas of the White Sea, and specifically explains genetic particulars of development of structural forms known as "budiazh" structures. Submitted by Academician D. S. Belyankin, 9 Jul 1947.</p> FDB 55T7

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USSR/Electricity (Contd)		Dec 1947		USSR/Geology	
coefficient of linear expansion ranging from 1.0 to $1.2 \cdot 10^{-6}$, in temperature ranges from 20 to 200° C. At present, this material is being used for burners of beacon lights. Submitted by Academician D. S. Belyankin, 21 Jul 1947.				Geological Prospecting	
				Coal	
				"Discovery of Coal Field in Sikhote-Alin," A. D. Miklukho-Maklay, 1½ pp	
				"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8	
				Briefly describes clues found that helped discover new coal deposit in the Upper Paleozoic extrusions of the Sikhote-Alin range, bordering Japan Sea. Coal classed as that belonging to the Lower and Upper Carboniferous eras. Submitted by Academician D. V. Nalivkin, 12 Jul 1947.	
FDB	55T6	FDB	55T8		
USSR/Geology		Dec 1947		USSR/Geology	
Stratigraphy				Geological Prospecting	
"The Konksk Horizon of Ust'-Urt," B. Zhizhchenko, Stratigraphic Sec, Inst Geol Sci, Acad Sci USSR, 1½ pp				Iron	
"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8				"Genetic Types of Iron Ore Deposits of Western Slopes of the Southern Urals," B. P. Krotov, 3 pp	
Tells of discovery of fauna belonging to type characteristic of middle Mediterranean era. Data collected in 1946 by Ust'-Urt Section, Institute of Geological Sciences. Submitted by Academician D. V. Nalivkin, 13 Jun 1947.				"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8	
FDB	55T9			Between the 53d and 55th N parallel on western slopes of the Southern Urals are located some of largest Soviet iron ore deposits. On the basis of data obtained, M. N. Dobrokhotov divided the various deposits according to types. He did not class the cave deposits, however, most of which formed as result of settling. Submitted by Academician I. F. Grigor'yev, 18 Jul 1947.	
USSR/Geology		Dec 1947		USSR/Geology	
Geological Prospecting				Stratification	
Minerals				"Chemostratification of Some Sapropels of Central Ural Lakes," V. D. Konshin, Lab Sapropel Deposits, For Inst, Acad Sci USSR, 3 pp	
"Some Geological Particulars of the Semimetallic Ores in the Basin of the Fiag-Don (Northern Oseti) River," A. P. Lebedev, Inst Geol Sci, Acad Sci USSR, 1½ pp				"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8	
"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8				Refers to data collected by 1945 Ural Expedition of the Academy of Sciences, and that collected by Ye. M. Titov, and sets up conditions permitting determination of chemostratification of some sapropels. Determinations were made primarily for lakes of the Kara and Siberian regions. Author discusses	
FDB	55T11	FDB	55T12		
USSR/Geology		Dec 1947		USSR/Geology (Contd)	
Hydrology				Dec 1947	
"Contemporary Hydro-Network of the Anabar Crystalline Massif in Connection With Particulars of Its Geological Structure," M. F. Belyakov, 2½ pp				sapropels of Lake Karas, and also of Lake Elov. Submitted by Academician V. N. Sukachev, 4 Jul 1947.	
"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8					
Discusses generally the contemporary state of various water systems in the Anabar crystalline region located northwest and northeast of the Anabar River. Submitted by Academician V. A. Obruchev, 17 Jul 1947.					
FDB	55T13	FDB	55T12		

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FDB Periodical Abstracts Scientific No 55

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USSR/Geology
Stratigraphy

Dec 1947

"The Middle Paleozoic Deposits of Kara-Koruma," N. A. Belyayevskiy, All-Union Sci Res Inst Geol, Leningrad, 3 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8

As a result of recent data, it is now possible to divide the middle paleozoic deposits of Kara-Koruma into three strata. Author discusses each of the three strata. Submitted by Academician V. A. Obruchev, 14 Jul 1947.

FDB

55T14

USSR/Geology

Dec 1947

"Formation of the Graywacke Formations in Mongolia," S. N. Alekseychik, 3 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8

Transformation and development of so-called graywacke formations in Mongolia are not well-studied. Author presents some additional data to that collected by Teilhardt de Chardin and V. A. Obruchev. Most recent data relegates these formations, some 4,000-5,000 meters thick, to the middle Paleozoic period. Also lists some of the organic remains found in these deposits. Submitted by Academician S. I. Mironov, 23 Jul 1947.

FDB

55T15

USSR/Geology
Metals
Iron

Dec 1947

"Correlation of Colored Strata of the Permian Period According to Content of Cobalt, Nickel, Copper, and Other Elements of the Iron Series," D. P. Malyuga, Inst Geochem and Anal Chem imeni V. I. Vernadskiy, Acad Sci USSR, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8

Author pays attention to fact that much of the variegated nature of color of the Permian layers can be traced to presence of nickel, chromium, or copper. In most cases, however, these elements are present

FDB

55T16

USSR/Geology
Oceanography

Dec 1947

"New Data on Past Low-Water Stages of the Caspian Sea," V. V. Yegorov, Soil Inst, Acad Sci USSR, 2 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8

Recent drops in level of the Caspian Sea revealed much new ground. Appearance of ground that was under water until recently permits compilation of new data on past low-water stages of the Caspian Sea. Author brings out some of the new data. Submitted by Academician B. B. Polynov, 23 Jul 1947.

FDB

55T17

USSR/Geology (Contd)

Dec 1947

in such small quantities that very sensitive method is required to determine their existence. Makes use of method explained in another article in "Journal of General Chemistry" Vol XII, No 6, 1943. One conclusion is that relation of elements of the iron family has great bearing on character of the genesis of layers, and thus can be used to determine formation of former precipitations. Submitted by Academician D. S. Belyankin, 9 Jul 1947.

FDB

55T16

USSR/Geology
Sulfur
Gypsum

Dec 1947

"Pseudomorphoses of Sulfur for Gypsum in the Kungur Marl of the Verkhne-Chusovskie Gorodki," V. A. Aprodov, Molotov State U, 2 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9

Discusses origin of precipitation deposits of sulfur, and their relation to gypsum, and gives description by L. M. Miropol'skiy of sulfur deposit at Syukev. Submitted by Academician D. S. Belyankin, 8 Aug 1947.

FDB

55T18

USSR/Geology
Geological Prospecting
Metals, Heavy

Dec 1947

"Question of the Age of the Solikamsk Layer in the Molotov Region of the Urals," S. G. Sarkisyan, Inst Combustible Minerals, Acad Sci USSR, 1 p

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9

Describes mineral analyses of rock from the Solikamsk, Kungur, and Kazan' layers, and lists some of the heavy metals found in the Molotov region of the Urals. Submitted by Academician S. I. Mironov, 13 Sep 1947.

FDB

55T19

USSR/Geology
Geological Prospecting
Coal

Dec 1947

"Discovery of Coal in Devonian Bauxites on Western Slopes of the Southern Urals," A. P. Braudorov, V. S. Meleshchenko, 3 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9

Gives details on discovery of coal in the Urals in 1945 by V. S. Meleshchenko, and on exact location of deposits. Submitted by Academician D. B. Nalivkin, 29 Jul 1947.

FDB

55T20

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FDB Periodical Abstracts Scientific No 55

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USSR/Geology

Dec 1947

"Question of the Presence of Alpine Intrusions in Priargun'ye (Eastern Transbaykal)," V. N. Kozerenko, E. M. Laz'ko, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9

Describes detailed research carried out in 1946 by authors in the Priargun'ye region. Gives results obtained in this and other research. Submitted by Academician V. A. Obruchev, 1 Aug 1947.

FDB

55T21

USSR/Geology

Volcanology

Dec 1947

"Relationship Between Elements of the Iron Series in Volcanic Mountain Rocks," D. P. Malyuga, Inst Geochem and Anal Chem imeni V. I. Vernadskiy, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9

Describes experiments designed to promote study of dispersion of elements of the iron series in volcanic mountain rocks on genetic basis, and to trace the origin of rocks and their place in the process of normal crystallization of molten rock. Submitted by Academician D. S. Belyankin, 8 Aug 1947.

FDB

55T22

USSR/Geology

Volcanology

Dec 1947

"Paleogeography of Centers of Jurassic Volcanism in the Greater Caucasus," A. P. Lebedev, Inst Geol Sci, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9

Gives details of volcanic formations at Kodor, Ingur, Rion, Liakhva, and other places. Includes geological map of the Caucasus area. Submitted by Academician D. S. Belyankin, 9 Jul 1947.

FDB

55T23

USSR/Geology

Stratigraphy

Dec 1947

"Boundary of the Campanian and Maas Strata," N. Mikhaylov, Inst Geol Studies, 3 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9

Describes the study of ammonite fauna in the Crimea, Southern Donbass, Caucasus, Lvov Oblast, and other places to obtain more accurate definition of stratigraphic layout of separation of Upper Cretaceous deposits. Submitted by Academician D. V. Nalivkin, 24 Jul 1947.

FDB

55T24

USSR/Geology

Stratification

Dec 1947

"Precipitations and Benthos in the Nizhnealay Sea in the Area of the Isfara River (South Fergana)," A. I. Osipova, Paleontol Inst, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9

Gives details of geological composition of the bed of the Isfara River. Includes detailed analysis of various types of rock found in the Alay strata. Submitted by Academician V. A. Obruchev, 30 Aug 1947.

FDB

55T25

USSR/Geology

Stratification
Coal

Dec 1947

"Subtriticite Layers of Upper Carbon," S. V. Semikhatov, Cent Sci Res Lab "SoyuzGazRazvedka" Trust, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9

Discusses theory that lower level of upper coal deposits is first below the level of the triticite layer. Describes geological conditions in Stalin-grad Oblast and other places. Submitted by Academician D. V. Nalivkin, 7 Sep 1947.

FDB

55T26

USSR/Geophysics

Seismography

Dec 1947

"Reflection of Waves From the Undersurface of the Earth's Crust During Deep Earthquakes," A. A. Treskov, Seismic Station "Irkutsk," Geophys Inst, Acad Sci USSR, 3 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9

Describes methods of work and results of experiments on wave reflection during earthquakes. Includes diagrams and explanation of seismogram tracings. Submitted 7 Aug 1947.

FDB

55T27

USSR/Hydrology

Water, Underground
Water - Analysis

Dec 1947

"Subterranean Waters of the Central Volga Region and Their Classification According to Their Chemical Composition," T. P. Afanas'yev, Lab Hydrogeol Problems imeni F. P. Savarenskiy, Acad Sci USSR, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8

States that waters of the central Volga region can be divided into two definite types. Those found above the Kungur layer, 100-300 meters thick, and those below the Kungur layer with width of about

FDB

55T28

RESTRICTED	FDB Periodical Abstracts Scientific No 55	RESTRICTED
USSR/Hydrology Limnology "Some Anomalies in Distribution of Salt Precipitations in Lake Deposits and Reasons for Their Occurrences," M. G. Balyashko, 3½ pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8 Refers to Vant-Hoff's method of classifying normal maritime deposits according to their solubility. In salt-water bodies, process of stratification comes about as result of polythermic crystallization of matter. Also states that study of salt deposits in contemporary lakes often helps to arrive at conclusion on their formation and also to make some FDB 55T29	USSR/Hydrology (Contd) 1,500 meters. Also classes waters found according to their chemical composition. Submitted by Academician D. S. Belyankin, 15 Jul 1947. FDB 55T28	
USSR/Hydrology (Contd) deductions on future formations of salt deposits. Submitted by Academician G. G. Urazov, 23 Jul 1947. FDB 55T29	USSR/Mathematics - Surfaces Mathematics - Equations, Differential "On Basic Lines on Surface," N. G. Tuganov, 4 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9 Gives series of differential equations for basic lines on surfaces under various conditions, particularly asymptotic. Submitted by Academician N. N. Luzin, 11 Sep 1947. FDB 55T30	
USSR/Medicine - Nerves Medicine - Depression "Development of Depression of Nerve Centers as Result of Prior Drawn-Out Irritation of Receptors," G. P. Konradi, Ye. S. Press, Chair Normal Physiol, Med Inst, Frunze, 3 pp "Byull Eksper Biolog i Medits" Vol XXIV, No 6 (12) Authors show self-generating form of depression occurring to nerve centers as result of prolonged previous irritation. Discusses methods used to conduct experiments, and briefly evaluates results obtained. Submitted, 9 Apr 1947. Deputy of Chair of Normal Physiology: Professor G. P. Konradi. LC 55T31	USSR/Medicine - Nerves, Motor Medicine - Nervous System, Sympathetic "Role of Sympathetic Nervous System in the Subordinating Changes of Speed of Accomodation in the Motor Nerves," P. Ye. Motsnyy, Chair of Physiol of Animals, State U, Dnepropetrovsk, 3 pp "Byull Eksper Biolog i Medits" Vol XXIV, No 6 (12) Refers to work by Orbeli, Brucke, Fasler, and others in the study of role of sympathetic nervous system in the changes caused by functional reconstruction of the peripheral neurons. Author discusses experiments he conducted to study in greater detail the LC 55T32	
USSR/Medicine - Blood Medicine - Gravity "Gravitational Effect on Blood in Magnetic Field," M. R. Mogendovich, O. S. Sherstneva, Chair Normal Physiol, Med Inst, Molotov, 4 pp "Byull Eksper Biolog i Medits" Vol XXIV, No 6 (12) Suspensions are acted upon by microgravitational effects and by macrogravitational effects. Authors briefly describe results of microscopic studies on the micro- and macrogravitational effects in blood, caused by magnetic field. Describe experiments and results of studies on microgravitational effects, and LC 55T33	USSR/Medicine - Nerves, Motor (Contd) role of sympathetic nervous system in the subordinating changes of the speed of accomodation by the peripheroneural system. Submitted, 13 Jun 1947. Deputy of Chair of Physiology of Animals: Professor M. M. Denisenko. LC 55T32	

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FDB Periodical Abstracts Scientific No 55

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USSR/Medicine - Blood (Contd)

Dec 1947

discuss macrogravitational effects. Submitted, 30 Apr 1947. Deputy of Chair of Normal Physiology: Professor M. R. Mogendovich.

LC

55T33

USSR/Medicine - Bacteriology
Medicine - Botulism

Dec 1947

"Pathogenesis of Botulism," K. I. Matveyev, Inst Microbiol, Epidemiol, and Infectious Diseases, Acad Med Sci USSR, Moscow, 2½ pp

"Byull Eksper Biolog i Medits" Vol XXIV, No 6 (12)

Matveyev and Fed'ko conducted experiments in which they inoculated white mice with nonlethal doses of B. botulinus spores, and observed results. They paid particular attention to consequent ineffectiveness of botulismotoxin. As result of experiments described herein, Matveyev was able to conclude that botulism

LC

55T35

USSR/Medicine - Bacteriology (Contd)

Dec 1947

is toxoinfectious disease. Submitted, 8 May 1947. Director of Microbiology, Epidemiology, and Infectious Diseases Institute: Professor V. D. Timakov.

LC

55T35

USSR/Medicine - Muscles
Medicine - Kinesithesis

Dec 1947

"Physical Characteristics in the Preactive State," K. M. Smirnov, F. V. Spiridonova, Physiol Lab, Sci Res Sec for Instruction of Officers in Physiol, Leningrad, 3 pp

"Byull Eksper Biolog i Medits" Vol XXIV, No 6 (12)

Preworking or prestarting state is observed during the period just before various muscles of man or animals are put into action. Study of this condition permits understanding of complex cortical regulation of functions during activity of the muscles. Authors

LC

55T37

USSR/Medicine - Sulfanilamide and
Sulfanilamide Derivatives
Medicine - Acid-Base Equilibrium

Dec 1947

"Effect of Streptocide on the Acid-Alkali Balance as Well as Carbonic Anhydrase of the Blood," A. M. Genkin, Inst Protection of Mothers and Babies, Chair Biochem, Med Inst, Sverdlovsk, 3½ pp

"Byull Eksper Biolog i Medits" Vol XXIV, No 6 (12)

Author refers to his previous article in "Klinicheskaya Meditsina" No 2, 1945. Discusses results of experiments conducted to determine extent of decrease in the carbonic anhydrase content of the

LC

55T34

USSR/Medicine - Sulfanilamide and Sulfa-
nilamide Derivatives (Contd)

Dec 1947

blood as result of streptocide medication. Reports on effect of this decrease on the activity of the ferment and on the alkali-acid balance of the blood. Submitted, 17 Jun 1947. Director of Institute for Protection of Mothers and Babies: Professor I. I. Yakovlev. Deputy of Chair of Biochemistry: Professor S. A. Braylovskiy.

LC

55T34

USSR/Medicine - Tuberculin
Medicine - Electrotherapy

Dec 1947

"Electrophoresis of Tuberculin," A. P. Parfenov, B. I. Sinel'nikova, Tuberculosis Inst imeni Shternberg, Leningrad, 3½ pp

"Byull Eksper Biolog i Medits" Vol XXIV, No 6 (12)

Study of introduction of tuberculin with aid of direct current must continue. One of first problems that must be solved is on the effect of direct current on the activity of tuberculin. So far, it has been observed that DC does not decrease, but greatly increases the activity of tuberculin.

LC

55T36

USSR/Medicine - Tuberculin (Contd)

Dec 1947

Authors present some more studies made to observe results of electrolysis of tuberculin. Submitted, 15 Jul 1947. Director of Tuberculosis Institute: Professor L. A. Emdin.

LC

55T36

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USSR/Medicine - Muscles (Contd) Dec 1947		USSR/Medicine - Leukocytes, Count Dec 1947 Medicine - Surgery		Dec 1947	
state that the degree of training in trained personnel is dependent on the amount of cortical regulation during muscular activity. This training refers to controlling of the preactive condition of the body. Submitted, 13 Jun 1947. Academician K. M. Bykov assisted with the experiments. Chief of Physiological Laboratory: Maj K. M. Smirnov, Medical Corps. Chief of Scientific Research Section: Col A. A. Rachkov, Medical Corps.		"Emotional Leukocytosis in the Surgical Clinic," A. N. Yartsev, Chair Hosp Surg, Med Inst, Sverdlovsk, 4 pp			
"Byull Eksper Biolog i Medits" Vol XXIV, No 6 (12)		Phenomenon of "psychic" leukocytosis has been known for long time; however, various factors causing it were not too well known. Author discusses studies conducted on presurgical patients to determine the changes in the leukocyte count. He discovered that there was average increase of 36% in the leukocyte			
LC	55T37	LC	55T38		
USSR/Medicine - Adrenal Preparations Dec 1947 Medicine - Tissue Respiration		USSR/Medicine - Leukocytes, Count (Contd) Dec 1947		Dec 1947	
"Hormone Regulation of Cell Respiration," I. P. Gelashvili, Chair Normal Physiol, State Med Inst, Tbilisi, 34 pp		count of patients as soon as they were placed on the operation table. Submitted, 16 Jun 1947. Deputy of Chair of Hospital Surgery: Professor A. T. Lidskiy, Corresponding Member, Academy of Medical Sciences, USSR.			
"Byull Eksper Biolog i Medits" Vol XXIV, No 6 (12)					
Part I of series on cell respiration, and discusses experiments conducted to determine effect of adrenalin on oxygen requirements by the cells of some organs. Submitted for judgment, 2 Jul 1944 at the Scientific Conference of Tbilisi Medical Institute. Gelashvili discusses in particular the effects caused					
LC	55T39	LC	55T38		
USSR/Medicine - Adrenal Preparations Dec 1947 (Contd)		USSR/Medicine - Parasites Dec 1947 Medicine - Parasitocides		Dec 1947	
by decomposition of adrenalin on respiration of cells. Experiments conducted on organs of the Rana ridibunda. Describes methods of experiment and results obtained. Submitted for publication, 13 Jun 1947. Deputy of Chair of Normal Physiology: Professor A. N. Bakuradze.		"Effect of Moniodoacetic Acid on Trichomonas Vaginalis in Cultures," M. A. Novikova, V. D. Nosina, Sec Experimental Malaria and Med Protozool, Inst Malaria and Med Parasitol, Acad Med Sci USSR, Moscow, 2 pp			
"Byull Eksper Biolog i Medits" Vol XXIV, No 6 (12)		At present there are no effective chemotherapeutical preparations to control trichomonas vaginalis. Authors discuss the comparative success obtained by use of moniodoacetic acid for control of this			
LC	55T39	LC	55T40		
USSR/Medicine - Plants Dec 1947 Medicine - Water		USSR/Medicine - Parasites (Contd) Dec 1947		Dec 1947	
"Water Content and Its Daily Variation in Leaves of Forest Mesophytes," G. I. Poplavskaya, For Inst, Acad Sci USSR, 4 pp		parasite. Submitted, 24 Jun 1947. Deputy of Experimental Malaria and Medical Protozoology: Professor Sh. D. Moshkovskiy, Corresponding Member, Academy of Medical Sciences, USSR. Director of Institute of Malaria and Medical Parasitology: Professor P. G. Sergiyev, Active Member, Academy of Medical Sciences, USSR.			
"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8					
Daily variation in the water content in leaves is least known in the case of mesophytes. Forestry Institute made series of studies on water balance in forests. Author presents some of results of observations. Submitted by Academician V. N. Sukachev, 19 Jul 1947.					
FDB	55T41	LC	55T40		

RESTRICTED		FDB Periodical Abstracts Scientific No 55		RESTRICTED			
USSR/Medicine - Plants Medicine - Cells		Dec 1947		USSR/Medicine - Forestry Medicine - Growth		Dec 1947	
"Some Physical and Chemical Properties of the Cellular Sap of Halophytes," A. A. Shakhov, Ye. S. Kachinskaya, For Inst, Acad Sci USSR, 3½ pp				"Microstructure of the Annual Rings of Siberian Larch (<i>Larix Sibirica</i> Ledeb.)," V. Ye. Vikhrov, For Inst, Acad Sci USSR, 3 pp			
"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8				"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8			
Subject properties are very little explained, and authors set themselves the task of studying the details. Discovered that the specific electroconductivity of the cellular sap of halophytes increases during vegetative period, and in relation to increase of solar radiation to the substrata. Bonding of min-				Vikhrov discusses the intersecting of two annual rings in such trees as the Siberian larch. Gives results of many studies made on early and late yearly rings. Studies conducted at the Yemtsov LesPromKhoz in Arkhangel'sk Oblast. Submitted by Academician V. N. Sukachev, 11 Jul 1947.			
FDB		55T42		FDB		55T43	
USSR/Medicine - Plants (Contd)		Dec 1947		USSR/Medicine - Darkness Medicine - Vision		Dec 1947	
eral ions by organic material cells increases the viscosity of cellular sap in the halophytes. Submitted by Academician V. N. Sukachev, 18 Jul 1947.				"Adaptation to Dark of Achromates," G. K. Gurtovoy, Sec Psychol, Inst Physiol, Acad Sci USSR, 2½ pp			
"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8				"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8			
Discusses experiments conducted to determine curves of adaptation to darkness of achromates as well as the trichromates. Over a period of three months some 26 experiments conducted to determine curves of darkness adaptation. Experiments conducted at the laboratory of S. V. Kravkov, Corresponding Member of the Academy of Sciences. Submitted by Academician L. A. Orbeli, 14 Jun 1947.				Discusses experiments conducted to determine curves of adaptation to darkness of achromates as well as the trichromates. Over a period of three months some 26 experiments conducted to determine curves of darkness adaptation. Experiments conducted at the laboratory of S. V. Kravkov, Corresponding Member of the Academy of Sciences. Submitted by Academician L. A. Orbeli, 14 Jun 1947.			
FDB		55T42		FDB		55T44	
USSR/Medicine - Plants Medicine - Environment		Dec 1947		USSR/Medicine - Invertebrates Medicine - Nerve Cells		Dec 1947	
"Bottom Blue-Green Water Plants of Sapropel Lakes," N. V. Korde, Lab Sapropel Deposits, For Inst, Acad Sci USSR, 3 pp				"The Basophilic Matter in Nerve Cells," L. B. Levinson, G. N. Platonova, Inst Zool, Moscow State U imeni M. V. Lomonosov, 4 pp			
"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8				"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8			
Author discusses results of studies conducted on various waters from several Kalinin Oblast lakes. He was able to distinguish two distinct types of bottom phytocenosis. These were: phytocenosis covering the bottom of lakes, and phytocenosis penetrating the "pelogene." Submitted by Academician V. N. Sukachev, 30 Jul 1947.				Authors discuss results of experiments conducted to determine the morphology of nerve cells and its connection with the production of basophilic matter of invertebrates. Basophilic matter is usually diffused throughout the protoplasm. Submitted by Academician I. I. Shmal'gauzen, 16 Jul 1947.			
FDB		55T45		FDB		55T46	
USSR/Medicine - Flies Medicine - Taxonomy		Dec 1947		USSR/Medicine - Marine Organisms Medicine - Taxonomy		Dec 1947	
"New Data on the Family, Schineria Rondani (Diptera, Larvaevoridae)," L. S. Zimin, Inst Zool, Acad Sci USSR, 4 pp				"Material on the Fauna Copepoda, Harpacticpoda of the Baykal Area," Ye. V. Borutskiy, Mus Zool, Moscow State U imeni M. V. Lomonosov, 4 pp			
"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8				"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8			
Briefly describes characteristics of the Schineria majae sp.nov., and also has short passage giving reference material for the Schineria gobica sp.nov. and the Schineria tergestina Rd. Submitted by Academician Ye. N. Pavlovskiy, 27 Aug 1947.				Author briefly describes some of characteristics of several members of the order Canthocamptus Westwood, in particular the Canthocamptus (Baicalocamptus) longifurcatus sp.n., the Canthocamptus (Canthocamptus) latus sp.n., and the Canthocamptus (Canthocamptus) bulbifer sp.n. Submitted by Academician I. I. Shmal'gauzen, 19 Jun 1947.			
FDB		55T47		FDB		55T48	

RESTRICTED

FDB Periodical Abstracts Scientific No 55

RESTRICTED

USSR/Medicine - Morphology
Medicine - Embryology

Dec 1947

"Dependence of the Formative Reaction of the Triturus Vulgaris Embryo in Various Development Stages in Experiments With Implantation of Pieces of Treated Tissues," I. I. Shmal'gauzen, Lab Organogenesis, Inst Evolutionary Morphol imeni A. N. Severtsov, Acad Sci USSR, 3 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8

Author reports results of experiments conducted to determine dependence of formation reaction of the Triturus vulgaris embryo in various development stages to which standard stimulants in the form of pieces of FDB

55T49

USSR/Medicine - Fish
Medicine - Oxygen

Dec 1947

"Oxygen Requirements of the Baykal Cottoidei," D. N. Taliyev, Ye. A. Koryakov, Baykal Limnol Sta, Acad Sci USSR, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8

Reports results of studies conducted to determine use of oxygen by particular members of the Baykal Cottoidei, the Comphoridae, the majority of the Cottocomphoridae, and finally those members of the Cottoidei found in the close vicinity of Baykal. Submitted by Academician I. I. Shmal'gauzen, 10 Jun 1947.

FDB

55T50

USSR/Medicine - Morphology (Contd)

Dec 1947

treated organs were applied. Submitted by Academician I. I. Shmal'gauzen, 19 Jul 1947.

FDB

55T49

USSR/Medicine - Plankton
Medicine - Oxidation

Dec 1947

"Speed of Decomposition of the Organic Matter of Dead Plankton," B. A. Skopintsev, Inst Geochem and Anal Chem, Acad Sci USSR, State Oceanographic Inst, 3 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8

Author presents arguments to support statement that for calculating constants for oxidation speeds it is necessary to divide nitrogen-containing particles of dead planktons by the initial concentration. Relation also established between amount of expended

FDB

55T51

USSR/Medicine - Drosophila
Medicine - Roentgen Rays, Effects

Dec 1947

"Comparison of the Nature of Mutation by X-Rays in Various-Type Drosophila," N. I. Shapiro, M. A. Arsen'yeva, S. N. Ardashnikov, Cent Sci Res Inst Roentgenol and Radiol, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8

Reports results of experiments conducted to determine quantitative characteristics of induced mutation in various types of Drosophila. Reports only the observations made during the course of the experiments. Full analysis of results will be published at later date. Submitted by Academician I. I. Shmal'gauzen, 21 Jul 1947.

FDB

55T52

USSR/Medicine - Plankton (Contd)

Dec 1947

nitrogen contained in the plankton and the practical constant usually characteristic for beginning of nitrification. Experiments carried out at temperatures of 25° C. Submitted by Academician B. L. Isachenko, 20 Aug 1947.

FDB

55T51

USSR/Medicine - Drosophila
Medicine - Chromosomes

Dec 1947

"Phenomenon of Fission During the Formation of New Genes," S. I. Alikhanyan, Moscow State U imeni M. V. Lomonosov, 3 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8

Briefly explains experiments conducted on the Drosophila melanogaster to determine the phenomenon of duplication or fission of the genes. Refers to work done previously by such scientists as Serebrovskiy, Rapoport, and Meller. Submitted by Academician I. I. Shmal'gauzen, 26 May 1947.

FDB

55T53

USSR/Medicine - Tissue
Medicine - Arginine

Dec 1947

"Histochemical Observations on the Arginine of Normal Tissues," G. I. Roskin, M. Ye. Struve, Moscow State U imeni M. V. Lomonosov, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8

Histochemical studies showed that arginine is contained in various tissues in various concentrations and that it has various localization in cells. It was also noted that in many tissues of the nucleolus there was very strong reaction to arginine, particularly in the pyramidal tissues, motor tissues of the medulla, and in the kidney tissues. Submitted by Academician L. A. Orbell, 2 Sep 1947.

FDB 55T54

RESTRICTED		FDB Periodical Abstracts Scientific No 55		RESTRICTED	
USSR/Medicine - Botany Medicine - Potatoes		Dec 1947	USSR/Medicine - Heat, Effects Medicine - Growth		Dec 1947
"Change of the Nature of the Potato by Means of Transplantation," G. Kh. Molotovskiy, Chernovits State U, 3 pp			"Instability of the Embryological Development of Poikilothermic Animals to Thermal Effects," I. V. Kozhanchikov, Inst Zool, Acad Sci USSR, 3 pp		
"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8			"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8		
Describes experiments and studies made to increase frost resistance of the potato. This was done by crossing the potato with member of the Solanaceae family. Submitted by Academician N. A. Maksimov, 8 Jul 1947.			Author reports results of further experiments to determine effect of heat on development of animals. He used embryological development of animals because this process made it easier to obtain exact data, and also this stage has the least outside factors affecting the process, therefore most reliable for experiments. Submitted by Academician Ye. N. Pavlovskiy, 7 Jul 1947.		
FDB		55T55	FDB		55T56
USSR/Medicine - Animals Medicine - Gonadotropins		Dec 1947	USSR/Medicine - Worms, Parasitic Medicine - Taxonomy		Dec 1947
"Intensification of the Gonadotropic Reaction of Animals, Which Are Under the Influence of Methylthiouracil," P. A. Vunder, V. F. Lapshina, Saratov State U imeni N. G. Chernyshevskiy, 3½ pp			"New Order of Filaria From the Intermuscular Tissues of Saiga," M. P. Gnedina, B. P. Vsevolodov, All-Union Inst Helminthol imeni K. I. Skryabin, 3pp		
"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8			"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8		
The hormone of thyroid iron has very great effect on development of animals. Describes results of experiments conducted on infant guinea pigs to determine the effect of methylthiouracil in regard to intensifying the gonadotropic reaction of animals. Submitted by Academician I. I. Shmal'gauzen, 25 Jul 1947.			Discusses localization of new-type nematode in Saiga of the Alma-Ata Zoological Gardens. Describes characteristics of this new nematode of the Filariidae family. Submitted by Academician K. I. Skryabin, 22 Jul 1947.		
FDB		55T57	FDB		55T58
USSR/Medicines - Worms, Parasitic Medicines - Morphology		Dec 1947	USSR/Medicine - Embryology Medicine - Cells		Dec 1947
"Classification of the Members of the Order Heterakis According to Its Component Members," Academician K. I. Skryabin, N. P. Shikhobalova, Helminthol Lab, Acad Sci USSR, 2½ pp			"Material Concerning the Similarity of Blastemic Cells With Embryonic Cells in Acsolotli," M. N. Efimov, Lvov Med Inst, 3 pp		
"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8			"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9		
Discusses results of studies made on monographs of nematodes of the Heterakis family, and analyzes morphological structure of all types classed as Heterakis by various scientists. Submitted, 21 Oct 1947.			Describes experiment in which author uses mucous olfactory organ of adult organism as organizational center, and indicates relation between blastemic cells and embryonic cells in Acsolotli. Submitted by Academician I. I. Shmal'gauzen, 14 Sep 1947.		
FDB		55T59	FDB		55T60
USSR/Medicine - Cell, Fission Medicine - Arginine		Dec 1947	USSR/Medicine - Cell Fission Chemistry - Ribonucleinic Acid		Dec 1947
"Cytochemical Changes in Ribonucleinic Acid and Arginine During Cell Fission," G. Roskin, M. Strube, Moscow State U imeni M. V. Lomonosov, 3 pp			"Content of Ribonucleinic Acid in Cell at the Time of Fission," L. B. Levinson, Z. P. Kanarskaya, Inst Zool, Moscow State U, 3 pp		
"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9			"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9		
Describes research that led to establishment of laws governing changes of ribonucleinic acid and arginine in cells in various tissues during cell fission. Submitted by Academician L. A. Orbelli, 2 Sep 1947.			Study of change in quantity and proportion of ribonucleinic acid in cell under fission, in comparison with quiescent cell, and clarification of presence of topographical connections between both nucleinic acids in cell. Submitted by Academician I. I. Shmal'gauzen, 16 Jul 1947.		
FDB		55T61	FDB		55T62

RESTRICTED	FDB Periodical Abstracts Scientific No 55	RESTRICTED
USSR/Medicine - Fish Medicine - Arctic Regions Dec 1947 "Penetration of Herring Into the Kara Sea and Other Arctic Regions, and Their Connection With Variations in Climate," I. I. Yudkin, 2½ pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9 Describes observations made by the Kara Scientific expedition in 1944-1946, and gives details of habits of herring in the Arctic at various seasons. Submitted by Academician I. I. Shmal'gauzen, 17 Sep 1947. FDB 55T63	USSR/Medicine - Drosophila Medicine - Eyes Dec 1947 "Genotypic Control of the Mosaic Nature in Drosophila Melanogaster," B. N. Sidorov, Inst Cytology, Histology and Embryol, 3 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9 Describes action of various factors controlling mosaic nature, and shows that they are analogous with action of supplementary passive regions and chromosomes. Submitted by Academician L. A. Orbelli, 2 Dec 1947. FDB 55T64	
USSR/Medicine - Wind Medicine - Wood Dec 1947 "Part Played by Wind in the Development of Timber Biogeocenosis," M. I. Sakharov, Belorussian Wood Tech Inst imeni S. M. Kirov, Minsk, 3 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9 Discusses wind effects and lists seven factors governing the intensity of lashing in timber biogeocenosis. Submitted by Academician V. N. Sukachev, 7 Aug 1947. FDB 55T65	USSR/Medicine - Marine Organisms Medicine - Oxygen Dec 1947 "Oxygen Equivalent for Organic Substances in Natural Waters," B. A. Skopintsev, Inst Geochem and Anal Chem, 3 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9 Describes methods and experiments to calculate oxygen equivalents. Submitted by Academician B. L. Isachenko, 20 Aug 1947. FDB 55T66	
USSR/Medicine - Trypanosoma Medicine - Serums Dec 1947 "Study of the Biochemical Nature of Serums Containing Leukocytic Triphons," A. A. Shutova, Inst Cytology, Histology and Embryol, 4 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9 Describes attempt to clarify stimulating action of serums in the process of phagocytosis, and their effects on growth and tissue regeneration. Submitted by Academician L. A. Orbelli, 2 Sep 1947. FDB 55T67	USSR/Medicine - Plants Medicine - Starch Dec 1947 "Question of Part Played by Phosphorous in Inversions of Starch in Living Plant," B. A. Rubin, V. E. Sokolova, 4 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9 Describes experiments designed to prove that there is relation between inversions of starch and phosphorous, and that this confirms the supposition that phosphorous influences inversions of starch in living plant. Submitted by Academician A. I. Oparin, 13 Sep 1947. FDB 55T68	
USSR/Medicine - Embryology Dec 1947 "Experimental Separation of Yolk and Intestinal Entoderms in the Embryo of Frog by Using Lead Salt," Z. S. Katsnel'son, Nav Med Acad, 3 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9 Describes experiment by author showing that the yolk entoderm has no plastic value, and that normal intestinal morphogenesis takes place even after the yolk entoderm is removed. Submitted by Academician I. I. Shmal'gauzen, 14 Sep 1947. FDB 55T69	USSR/Medicine - Wood Medicine - Growth Dec 1947 "New Data on Positive Influence of Short Day on Growth of Wood Plants," F. L. Shchepot'yev, Ukrainian Sci Res Inst Agr and For Conservation and Timber Industry, Khar'kov, 3 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9 Gives results of photoperiodical experiments on the common pine confirming theory that short day has stimulating action on growth and development of certain wood plants. Submitted by Academician V. N. Sukachev, 12 Jul 1947. FDB 55T70	

RESTRICTED		FDB Periodical Abstracts Scientific No. 55		RESTRICTED	
USSR/Medicine - Plants Medicine - Hybrids		Dec 1947	USSR/Medicine - Pine Medicine - Fission		Dec 1947
"Embryological Investigation of Two Forms of Vetchling, <i>Lathyrus Articulatus</i> L., and <i>Lathyrus Clymenum</i> L.," N. A. Sysina, 4 pp			"Cytological Investigation of the Polyploids of Pine," M. V. Komissarova, Cent Sci Res Inst Timber Industry, Leningrad, 3 pp		
"Dok Akad Nauk SSSR, Nov Ser" Vol LVIII, No 9			"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9		
Gives study of embryological features of two types of vetchling belonging to the group Leguminosae, sub-group Papilionaceae, Tribe Viciae, section Clymenum, and clarifies causes of sterility in the breeding of <i>L. Clymenum</i> and <i>L. articulatus</i> . Submitted by Academician N. V. Tsitsin, 30 Jul 1947.			Deals with these questions: What polyploid stage does plant reach with the action of varied concentrations of colchicine and exposures? What is the nature of nuclear and cell fission of plants in different polyploid stages? Submitted by Academician V. N. Sukachev, 13 Jul 1947.		
FDB		55T71	FDB		55T72
USSR/Medicine - Plants Medicine - Enzymes		Dec 1947	USSR/Medicine - Worms Medicine - Taxonomy		Dec 1947
"Influence of Mineral Elements on the Absorption of Invertases by Tissues of Higher Plants," N. M. Sisakyan, Inst Biochem imeni A. N. Bakh, 2 pp			"New Species of Viviparous Multigenetic Trematoda," B. Bykhovskiy, Zool Inst, Acad Sci USSR, 2½ pp		
"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9			"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9		
Describes influence of various types of salt on the absorption of invertases, and gives results of experiments conducted to determine the most effective. Submitted by Academician A. I. Oparin, 9 Sep 1947.			Briefly describes new Species Gyrodactylidae, and work carried out in total glycerine-gelatine preparations, which prevented study of many details of anatomical structure. Submitted by Academician E. N. Pavlovskiy, 7 Sep 1947.		
FDB		55T73	FDB		55T74
USSR/Medicine - Insects Medicine - Parasites		Dec 1947	USSR/Medicine - Botany Medicine - Microorganisms		Dec 1947
"Taxonomic Value of Morphological Symptoms of Scale Insects (<i>Coccoidea</i> , <i>Pseudococcus</i>)," N. S. Borkhsenius, Zool Inst, Acad Sci USSR, 2 pp			"Fauna Sotepoda-Harpacticoida of Epiphytic Microhydrocotyles," E. V. Borutskiy, Zool Mus, Moscow State U imeni M. V. Lomonosov, 4 pp		
"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9			"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9		
Describes experiments on various types of scale insect, and lists types of parasitic scale insects and their symptoms. Submitted by Academician E. N. Pavlovsk, 15 Aug 1947.			Gives results of research in Moscow Botanical Gardens of epiphytic microhydrocotyles formed in leaves of various tropical plants, particularly the species <i>Brameliaceae</i> . Submitted by Academician I. I. Shmal'gauzen, 19 Jun 1947.		
FDB		55T75	FDB		55T76
USSR/Medicine - Flour Medicine - Food		Dec 1947	USSR/Meteorology Weather - Effects		Dec 1947
"Change in Quality of Rye Flour During Storage," V. Kretovich, P. Tokareva, L. Auerman, N. Smolina, A. Kyl'man, P. Branopol'skaya, assisted by P. Petrova, All-Union Sci Res Inst Baking Industry; T. Drozdova, Inst Biochem imeni A. N. Bakh, 4 pp			"Weather Formation in Central Asia," T. A. Sarymsakov, Active Mem, Acad Sci Uzbek SSR, V. A. Bugayev, V. A. Dzholdzhio, 3 pp		
"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9			"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9		
Describes work over three-year period on biochemical, colloid chemical, and technological research on rye flour during storage. Submitted by Academician A. I. Oparin, 13 Sep 1947.			Discusses weather factors in Central Asia such as effects from the south (tropical air inroads, meridional circulation), effects from the north (arctic air inroads, meridional circulation), effects from the west (zonal circulation), and changing conditions with predominance of the transformation processes of air masses.		
FDB		55T77	FDB		55T78

RESTRICTED	FDB Periodical Abstracts Scientific No 55	RESTRICTED
USSR/Nuclear Physics - Elementary Particles Nuclear Physics - Theory "On Classification of Functions of System of Particles Identical in Symmetry and Moment of Impulse," I. Godnev, V. Sorokin, 3 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9 Discusses classification according to nature and symmetry of all possible conditions of such systems relative to group of permutations of orbital or spin coordinates of identical particles and in accordance with values of a complete moment. Submitted by Academician V. A. Fok, 29 Aug 1947. FDB 55T79	USSR/Physics Solar Phenomena Radio Waves "Investigations of the Sun's Radio Emissions by the Brazil Expedition of the Academy of Sciences of the USSR During the Solar Eclipse, 20 May 1947," S. E. Khaykin, B. M. Chikhachev, 3 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9 Discusses measurement of the sun's radio emissions using special receiver. Gives details of data obtained by observatories during solar eclipse. Submitted by Academician S. I. Vavilov, 28 Oct 1947. FDB 55T80	
USSR/Physics Luminescence Phosphorus "Theoretical Form of Crystalline Phosphorus and the Effect of Cold Luminescence," A. I. Adirovich, Phys Inst imeni P. N. Lebedev, 4 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9 Discusses the "hot and cold" luminescence bands of crystalline phosphorus, and details of its form and composition. Submitted by Academician S. I. Vavilov, 4 Nov 1947. FDB 55T81	USSR/Physics Polarization Radiation "Photoelectric Method of Measuring the Degree of Polarization of Radiations," L. A. Tumerman, Phys Inst imeni P. N. Lebedev, 4 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9 Describes experiments with various methods to measure the degree of polarization of radiation, including those of Kornyu, Savar, and Lyot. Submitted by Academician S. I. Vavilov, 1 Sep 1947. FDB 55T82	
USSR/Physics Sound - Reflection Mathematics, Applied "Reflection of Sound Waves in Tube From the Open End," L. A. Vaynshteyn, 4 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9 Author evolves equation permitting calculation of the coefficient of basic wave, and characteristics of the radiation from the open end. Submitted, 10 Sep 1947. FDB 55T83	USSR/Physics Ionosphere Solar Phenomena "Investigations of the Ionosphere Layer F ₂ at the Time of Total Solar Eclipse, 20 May 1947," Ya. L. Al'pert, Lab Oscillations imeni L. I. Mandel'shtam, Phys Inst imeni P. N. Lebedev, 4 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9 Discusses the stable and unstable condition of the F ₂ ionosphere layer as observed from Brazil. Gives details of data obtained by observatories during solar eclipse. Submitted by Academician M. A. Leontovich, 23 Oct 1947. FDB 55T84	
USSR/Physics Luminescence Crystals "Ultraviolet Luminescence of Monocrystals KCl and KBr, X-Rayed at Low Temperature," M. L. Kats, Saratov State U, 4 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9 Discusses measurement of the relation of intensity of luminescence of NaCl crystals, X-rayed at the temperature of liquid air, to their temperature upon subsequent heating, which may serve as new and highly convenient method to investigate the energetic spectrum of local energy levels in a crystal. Submitted by Academician S. I. Vavilov, 23 Jul 1947. FDB 55T85	USSR/Physics Eutectics Fusion "Effect of Contact Fusion as Principle of Low Eutectic Fusibility," D. D. Saratovkin, P. A. Savintsev, 2 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9 Describes experiments designed to show that in all cases of eutectic fusion, liquid stage occurs at point of contact, where certain components become eutectic. Submitted by Academician S. I. Vavilov, 1 Sep 1947. FDB 55T86	

RESTRICTED		FDB Periodical Abstracts Scientific No 55		RESTRICTED	
USSR/Physics Solar Phenomena	Dec 1947	USSR/Physics Lubricants Hydraulics	Dec 1947		
<p>"Turbulence of the Solar Chromosphere," A. B. Severnyy, Crimean Astrophys Observatory, Acad Sci USSR, 4 pp</p> <p>"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8</p> <p>Author discusses the outer layer of the solar atmosphere found to be in adjusted state of an unregulated movement of gases or turbulent movements: Author assumes that the chromosphere is formed as the result of the autosuperimposition of products of protuberances. Article is general introduction, and fuller explanation will be given in following article. Submitted by Academician G. A. Shayn, 1 Jul 1947.</p> <p>FDB 55T87</p>		<p>"Module of Displacement and the Limits of Viscosity of Calcified Lubricants," G. V. Vinogradov, K. I. Klimov, Acad Armored Vehicles and Mech Troops of Soviet Army imeni Stalin, 3 pp</p> <p>"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8</p> <p>In connection with study of the phenomenon of creep and aftereffects in lubricants and results obtained from studies of limited displacement factors in capillaries, authors take up three additional aspects of the case: 1) to classify elastic</p> <p>FDB 55T88</p>			
USSR/Physics Sound - Speed Liquids	Dec 1947	USSR/Physics (Contd)	Dec 1947		
<p>"Speed of Sound in Some Organic Liquids, and Rama Rao's Molecular Constant," I. G. Mikhaylov, A. M. Hizhin, Phys Inst, Leningrad State U, 4 pp</p> <p>"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8</p> <p>Recently Rama Rao published article in which he submitted new additive molecular constant which can be represented by the following equation: $C \frac{1}{2} M = R$</p> <p>Physical explanation of this equation is difficult task. There also appears the question of whether or</p> <p>FDB 55T89</p>		<p>deformations in lubricants, according to Hook, or according to their static characteristics; 2) to determine relation between amount of deformation in lubricants and degree of displacement force; 3) to guarantee in torsion-type equipment the decrease of the factor observed in capillaries during slow supply of lubricant. A. S. Irisov, Professor M. M. Kusakov, and L. F. Kalmykova aided greatly in the experiments. Submitted by Academician S. S. Nametkin, 7 Jul 1947.</p> <p>FDB 55T88</p>			
USSR/Physics (Contd)	Dec 1947	USSR/Physics Gravitation Quantum Theory	Dec 1947		
<p>not this new additive constant can be used to study the structure of molecules. Authors discuss results of the first experiments conducted to determine whether or not this is possible. Professor B. N. Dolgov, M. A. Khokhlovkin, and Academician S. V. Lebeve's collection of isobutyl polymers were of great assistance. Submitted by Academician A. N. Terenin, 16 Jul 1947.</p> <p>FDB 55T89</p>		<p>"New Traces of Quantum Theory of Gravitation," D. Ivanenko, A. Sokolov, Phys Inst, Moscow State U imeni M. V. Lomonosov, 31 pp</p> <p>"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8</p> <p>To be able to discuss the new effects of gravitational annihilation and production of particles, it is necessary to treat the gravitational fields as secondary quantum, and to establish relation between the particles and the fields. Authors</p> <p>FDB 55T90</p>			
USSR/Physics Electrons - Reflection Electrons - Measurements	Dec 1947	USSR/Physics (Contd)	Dec 1947		
<p>"Determining Coefficients of Reflection of Slow Electrons of Tungsten, Molybdenum, and Tantalum," Yu. A. Nemilov, Leningrad Phys Engin Inst, Acad Sci USSR, 4 pp</p> <p>"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8</p> <p>Author explains piece of equipment he developed for purpose of eliminating errors that appear during measuring of the coefficient of reflection. These errors are result of inability to make exact focusing of the pulse of slow electrons. Explains the operation of this apparatus, and describes the bases on</p> <p>FDB 55T91</p>		<p>discuss four principal factors: 1) quantization of fields, 2) relation of particles and gravitons, 3) illumination of gravitons, and 4) gravitational annihilation of particles. Submitted by Academician S. I. Vavilov, 24 Jul 1947.</p> <p>FDB 55T90</p>			

RESTRICTED	FDB Periodical Abstracts Scientific No 55	RESTRICTED
USSR/Physics (Contd) Dec 1947 which he built the apparatus. Submitted by Academician P. I. Lukirskiy, 6 Jun 1947.	Dec 1947	USSR/Physics Crystallography Metals Dec 1947 "Calculating Interatom Distance in Metals and Their Alloys," E. S. Sarkisov, 4 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8 In earlier work, author explained significance of the equation: $R = C_R F^{1/3} / t^{1/3}$ used to calculate the characteristic atomic radii of all elements in crystals. Here author explains the equation: $\lambda = C_d \frac{p F_1^{1/3} + (1-p) F_2^{1/3}}{[p F_1 + (1-p) F_2]^{1/3}}$
FDB 55T91		FDB 55T92
USSR/Physics Steam - Supersaturation Mathematics, Applied Dec 1947 "Generation of Supersaturated Steam," A. G. Amelin, Sci Inst Fertilizers and Insecticides, 4 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8 Author discusses generation of supersaturated steam. Develops some formulas and conclusions that will be of assistance in explaining the phenomenon which occurs in solutions, because of the fact that rules covering formation of new phases in gases and liquids are general and similar. Academician S. I. Vol'fko-	Dec 1947	USSR/Physics (Contd) Dec 1947 used to determine the interatom distance of binary alloys. From this he develops an equation that can be used for similar purpose for any type of metallic alloy. Submitted by Academician I. I. Chernyayev, 6 Jun 1947.
FDB 55T93		FDB 55T92
USSR/Physics (Contd) Dec 1947 vich, and B. V. Deryagin, Corresponding Member of the Academy of Sciences, USSR, aided in collection of data. Submitted by Academician S. I. Vol'fkovich, 11 Jul 1947.	Dec 1947	USSR/Physics Solid Solutions Crystals, Mixed Dec 1947 "Relationship Between Diffusion and Speed of Formation of New Phase in Solid Solutions," L. A. Vaynshteyn, M. I. Zakharova, 4 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8 Speed of formation of new phase is determined by speed of formation of new combination of atoms disposed more or less regularly in the matrix solution. This can be divided into two definite processes: the first ends with transfer of atoms from
FDB 55T93		FDB 55T94
USSR/Physics Sonar Sound Receivers Dec 1947 "One Method of Absolute Calibration of Sound Receivers by Means of Reciprocity Method," M. V. Kazantseva, Phys Inst imeni P. N. Lebedev, Acad Sci USSR, 2 1/2 pp "Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8 Author explains method of calibration that is carried out in tube which is not less than half the sound wavelength. Two tests conducted to confirm theoretical data, expressed by the author: 1) measurement of open circuit voltage developed by the transformers,	Dec 1947	USSR/Physics (Contd) Dec 1947 various parts of mother solution to surface of the nucleus, while the second process is their regrouping which conforms to structure of the metastable or stable phase of the division and fission. Submitted by Academician M. A. Leontovich, 26 Jun 1947.
FDB 55T95		FDB 55T94

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USSR/Physics (Contd)	Dec 1947	USSR/Physics	Dec 1947		
and 2) measurement of relation of no-load voltage of the calibrated sound receiver, located at end of tube, to the induced current in the transformer circuit. N. N. Andreyev, Corresponding Member of the Academy of Sciences, USSR, aided in the experiments. Submitted by Academician S. I. Vavilov, 23 Jul 1947.		Electromagnetic Waves Wave Propagation Wave Guides - Propagation			
		"Theory of Propagation of Electromagnetic Waves in Pipes Which Have Intermittently Varying Cross Sections," G. V. Kisun'ko, Red Banner Mil Acad Communications imeni S. M. Budenniy, 4 pp			
		"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8			
		Author discusses propagation of electromagnetic waves through ideally conducting cylindrical tube, so formed that it contains intermittent variations			
FDB	55T95	FDB	55T96		
USSR/Physics	Dec 1947	USSR/Physics (Contd)	Dec 1947		
Ceramics - Corundum					
"Interaction of Bonds With Corundum in Thermal Treatment of Ceramic Crocks," N. Ye. Filonenko, Cent Sci Res Lab Abrasives and Buffers, 3 pp		in its shape. Also discusses relation of transverse cross section of cylinder to preservation of mode of waves formed. Submitted by Academician B. A. Vvedenskiy, 19 Jul 1947.			
"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8					
Very little information has been published on interaction of bonds with corundum during thermal treatment of ceramic crocks. Therefore author set before himself series of studies to determine processes of interaction of ceramic or glass bonds with corundum					
FDB	55T97	FDB	55T96		
USSR/Physics (Contd)	Dec 1947	USSR/Physics	Dec 1947		
during thermal treatment of ceramic crocks. Lists bonding materials used, and describes experiments and results obtained. Submitted by Academician D. S. Belyankin, 15 Jul 1947.		Photoconductivity Copper Oxides			
		"Temperature Relationship of Photoconductivity in Oxides of Copper," V. P. Zhuze, S. M. Ryvkin, Leningrad Phys Engin Inst, Acad Sci USSR, 3½ pp			
		"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8			
		Authors had two definite tasks: 1) to determine temperature progress of stationary (settled) photoconductivity in Cu ₂ O, and 2) studies of effect of temperature on process of establishing equilibrium during processing of darkening and illuminating			
FDB	55T97	FDB	55T98		
USSR/Physics	Dec 1947	USSR/Physics (Contd)	Dec 1947		
Paramagnetism Oscillations					
"Oscillating Phenomena in Paramagnetism of the Nucleus," K. V. Vladimirovskiy, Phys Inst imeni P. N. Lebedev, Acad Sci USSR, 3½ pp		the sample. Describe experiments and results. Academicians A. F. Ioffe and A. V. Ioffe were very helpful in the experiments. Submitted by Academician A. F. Ioffe, 30 Jul 1947.			
"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 8					
In various previous works scientists had investigated resonance variation of absorption and magnetic susceptibility, which is connected with preception of magnetic moments of nuclei in the adiabatically changing outer fields. Author describes phenomenon,					
FDB	55T99	FDB	55T98		

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~~Restricted~~

USSR/Physics (Contd)

Dec 1947

which is due to increase in the modulating frequency Ω , and decrease of amplitude of radio frequency field within limits of field of adiabatic transfer through the resonance. Submitted by Academician M. A. Leontovich, 13 Sep 1947.

USSR/Soil Science
Water Systems

Dec 1947

"Water System of Sandy Soils in Forests and Fields," A. A. Molchanov, Inst For, 3 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 9

Discusses conclusions reached by G. I. Vysotskiy on lack of water-preserving properties in forest soils. Includes tables showing relative humidity of soils under various conditions. Submitted by Academician V. N. Sukachev, 17 Aug 1947.

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List of Abbreviations
used in FDB Periodical Abstracts

ID	Intelligence Division Library
AMC	Air Documents Division, Air Materiel Command
ST	Reference Division, State Department
BM	Bureau of Mines, Dept of Interior
BS	National Bureau of Standards
SI	Smithsonian Institution
LC	Library of Congress
FDB	Foreign Documents Branch, CIA
COM	Department of Commerce
AF	A-2 Library, USAF

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